

Int. Appl. No. : PCT/NZ2004/000231
Int. File Date : September 23, 2004

AMENDMENTS TO THE CLAIMS

1. **(Original)** A device capable of insertion into a teat orifice wherein the device is capable of being held in position entirely within the teat streak canal once inserted therein, and wherein the surface of the device is contoured to integrate with endogenous keratin to form a composite plug.

2. **(Original)** The device as claimed in claim 1 wherein the device is configured to deliver one or more treatment substances to the streak canal.

3. **(Original)** The device as claimed in claim 2 wherein the device is configured to deliver said one or more treatment substances for a period of time necessary for endogenous keratin plugs to form.

4. **(Currently Amended)** The device as claimed in ~~any one of claims 1 to 3~~ wherein the device is configured to degrade over time.

5. **(Currently Amended)** The device as claimed in ~~any one of claims 1 to 4~~ wherein the device is configured to act as a physical barrier to prevent the unwanted passage of substances through the streak canal.

6. **(Currently Amended)** The device as claimed in ~~any one of claims 1 to 5~~ wherein the device is made of a preformed matrix.

7. **(Original)** The device as claimed in claim 6 wherein the matrix is silicone.

8. **(Currently Amended)** The device as claimed in claim ~~1-6 or claim 7~~ wherein one or more treatment substance(s) are contained within the inner core of the device.

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9. **(Currently Amended)** The device as claimed in claim ~~1~~ ~~6~~ ~~or claim 7~~ wherein the matrix is impregnated with said one or more treatment substances.

10. **(Original)** The device as claimed in claim 9 wherein said one or more treatment substances are delivered by diffusion from the matrix.

11. **(Original)** The device as claimed in claim 9 wherein said one or more treatment substances are delivered through dissolution of the matrix.

12. **(Currently Amended)** The device as claimed in ~~any one of claims 2 to 11~~ said one or more treatment substances are selected from a list including antibiotics, antibacterial substances, tissue growth enhancers, vitamins, minerals, hormones, oxytocin, prolactin, and healants.

13. **(Currently Amended)** The device as claimed in ~~any one of claims 1 to 12~~ wherein the device is configured to withstand the build up of milk pressures immediately post-drying off without the device being ejected.

14. **(Currently Amended)** The device as claimed in ~~any one of claims 1 to 13~~ wherein the device is configured to be dislodged from the streak canal by the milk pressure generated as a consequence of lactogenesis.

15. **(Currently Amended)** The device as claimed in ~~any one of claims 1 to 14~~ wherein the device includes one or more surface features to enhance the retention of the device.

16. **(Original)** The device as claimed in claim 15 wherein said one or more surface features include one or more grooves.

17. **(Currently Amended)** The device as claimed in claim 15 ~~or claim 16~~ wherein said one or more surface features include a spiral thread.

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18. **(Currently Amended)** The device as claimed in ~~any one of claims 15 16 to 17~~ wherein said one or more surface features include a plurality of protrusions.

19. **(Currently Amended)** The device as claimed in ~~any one of claims 15 to 18~~ wherein said one or more surface features are configured so as to cause minimal dislodgment of keratin at insertion and integrate with endogenous keratin.

20. **(Currently Amended)** The device as claimed in ~~any one of claims 1 to 19~~ wherein the device is configured to allow the surrounding smooth muscle layer of the streak canal to form naturally and without irritation around the body of the device.

21. **(Currently Amended)** The device as claimed in ~~any one of claims 1 to 20~~ wherein the device includes a recess which extends at least part of the axial length of the device.

22. **(Original)** The device as claimed in claim 21 wherein the recess acts as a reservoir to hold one or more treatment substances.

23. **(Currently Amended)** A device as claimed in claim 21 ~~or claim 22~~ wherein the recess extends substantially the axial length of the device to form a conduit.

24. **(Original)** The device as claimed in claim 23 wherein the conduit permits the passage of instruments, applicators, other devices, one or more treatment substances.

25. **(Original)** The device as claimed in claim 23 wherein the conduit allows the passage of milk.

26. **(Currently Amended)** The device as claimed in ~~any one of claims 23 to 25~~ wherein the conduit allows the animal to be milked while the device is in position.

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27. **(Currently Amended)** A device as claimed in ~~any one of claims 23 to 26~~ wherein the external aperture of the conduit exerts control over teat orifice dilation and/or closure to control and/or improve milk harvesting.

28. **(Original)** The device as claimed in claim 27 wherein the aperture has a two-way valve system.

29. **(Currently Amended)** The device as claimed in claim 27 ~~or claim 28~~ wherein the aperture is operated by vacuum pulsation.

30. **(Currently Amended)** The device as claimed in claim 27 ~~or claim 28~~ wherein the aperture is operated by an inductive pulse.

31. **(Currently Amended)** A method of treating an animal using a device as described in ~~any one of claims 1 to 30~~.

32. **(Original)** A method of treating an animal using a device capable of insertion into a teat orifice characterised by the step of inserting said device into a teat orifice during involution, the device capable of being held in position entirely within the teat streak canal once inserted therein and wherein the surface of the device is contoured to allow the formation of an endogenous keratin plug.

33. **(Original)** A method of treating an animal as claimed in claim 32 including the further step of delivering one or more treatment substances to the streak canal.

34. **(Cancelled)**

35. **(Cancelled)**